

REMARKS

Claims 1, 8 and 9 have been amended to further limit the weight average molecular weight of copolymer (B). Support for the amended claims can be found paragraph [0025] and the Working Examples. Claim 1 has been further amended to recite rubber component (A). Support for rubber component (A) can be found in paragraph [0007]. Claim 16 has been added. Support for Claim 16 can be found in Table 2, Example 3 and Table 3, Examples 5-7. Upon entry of this Amendment, which is respectfully requested, Claims 1-16 will be pending.

Response to Claim Objections

Claims 2, 3, 10, 13, 14 are objected to because of informalities.

As noted, Claim 1 has been amended to recite “rubber component (A).” Accordingly, withdrawal of the objection is respectfully requested.

Response to Claim Rejections Under § 102

(I) Claim 1-12 and 15 are rejected under 35 U.S.C. § 102(b) as being anticipated by JP 2003253051 to Nakagawa et al. Applicants respectfully traverse.

The present claims relate to a rubber composition characterized by containing 5-60 parts by mass of an aromatic vinyl compound-diene compound copolymer (B) having a weight average molecular weight of more than 50,000 but not more than 300,000 (conversion to polystyrene through gel permeation chromatography) based on 100 parts by mass of a rubber component (A) comprising at least one rubber of natural rubber and synthetic diene-based rubbers in which the copolymer (B) comprises 5-80 mass% of the aromatic vinyl compound and a vinyl bond content in diene compound portion is 10-80 mass%.

Nakagawa discloses a rubber composition comprising (A) 100 parts by mass of a styrene-butadiene copolymer having a weight average molecular weight of 400,000 to 3,000,000 and (B)

10-200 parts by mass of a styrene-butadiene copolymer having a weight average molecular weight of 5,000 to 200,000.

Nakagawa further discloses that the styrene-butadiene copolymer (A) has a bound styrene content of 10-50% by mass and a vinyl bond content in a butadiene portion of 20 to 70% and the styrene-butadiene copolymer (B) has a bound styrene content of 25-70% by mass,. However, Nakagawa fails to disclose or suggest a vinyl bond content in a butadiene portion of the styrene-butadiene copolymer (B).

Thus, Nakagawa fails to anticipate or render obvious the present claims. Accordingly, withdrawal of the § 102 rejection based on Nakagawa is respectfully requested.

(II) Claims 1-2, 5-9, 13-15 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,866,131 to Fujimaki et al. Applicants respectfully traverse.

Present Claim 1 recites an aromatic vinyl compound-diene compound copolymer (B) having a weight average molecular weight of more than 50,000 but not more than 300,000.

In contrast, Fujimaki discloses a low molecular weight copolymer of butadiene and an aromatic vinyl compound having a molecular weight in the range of 20,000 to 50,000. Further, Fujimaki discloses that if the molecular weight of the copolymer is above 50,000, the resultant rubber composition does not sufficiently augment in the hysteresis loss value. Thus, Fujimaki teaches away from the present invention.

In addition, as shown in the attached Declaration, a rubber composition comprising an aromatic vinyl compound-diene compound copolymer (B) having a weight average molecular weight of more than 50,000 but not more than 300,000 improves the processability and the storage modulus, and also decreases the loss factor of the rubber composition. One skilled in the art would not expect these results from Fujimaki.

Accordingly, Fujimaki fails to anticipate or render obvious the present claims.

Withdrawal of the § 102 rejection based on Fujimaki is respectfully requested.

Response to Claim Rejections Under § 103

Claims 10-12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fujimaki as applied to Claim 1 above, and further in view of U.S. Patent No. 5,500,482 to Muraki et al.

Applicants respectfully traverse.

Muraki does not disclose or suggest a molecular weight of the styrene-butadiene copolymer (SBR). Thus, Muraki fails to make up for the deficiency of Fujimaki discussed above. Thus, Fujimaki and Muraki fail to render obvious the present claims. Accordingly, withdrawal of the § 103 rejection is respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Bruce E. Kramer
Registration No. 33,725

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: March 24, 2009